

WHAT IS CLAIMED IS:

1. A device for testing the scratch resistance of a surface of a test specimen
by means of a gas stream charged with solid particles, comprising
 - 5 a tube, having an entry and an exit, for directing the gas stream on
to a specimen holder with the surface to be tested,
a means for providing the gas stream, and
a metering device positioned along the tube for metering the solid
particles into the gas stream,
 - 10 wherein a tube part is angled at an angle in the region of the tube exit and
the angled tube part has, at the angle, an opening at which the specimen
holder is positioned such that the gas stream is directed on to the specimen
holder.
- 15 2. The device according to claim 1, characterized in that the angle of the tube
in the region of the opening is 5 to 90°.
3. The device according to claim 1, characterized in that the diameter of the
tube and the length of the tube between the metering device and the
20 opening are in a ratio of 1:5 to 1:100 to one another.
4. The device according to claim 1, characterized in that the tube has a square
cross-section.
5. The device according to claim 1, characterized in that the tube has a
25 control valve for regulation of the flow rate.
6. The device according to claim 1, characterized in that the flow rate of the
gas stream charged with solid particles can be regulated in the range from
1 to 100 m/s.
- 30 7. The device according to claim 1, characterized in that the particle size of

the solid particles is from 10 to 2,000 μm .

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8. The device according to claims 1, characterized in that the density of the solid particles is from 500 to 22,000 kg/m^3 .
9. The device according to claim 1 characterized in that the loading of the gas stream with solid particles is from 0.1 to 500 g/m^3 .
- 10 10. The device according to claim 1, wherein the means for providing the gas stream includes one or both of a fan at the tube entry and a suction device at the tube exit.
11. The device according to claim 1, wherein the tube is replaceable.
- 15 12. The device according to claim 1, wherein the specimen holder is connected detachably to the tube.
13. The device according to claim 1, wherein the specimen holder is provided at the angle inside the angled tube part.

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14. The device according to claim 3, wherein the diameter of the tube and the length of the tube between the metering device and the opening are in a ratio of 1:20 to 1:30 to one another.
- 5 15. The device according to claims 8, wherein the density of the solid particles is from 1,000 to 10,000 kg/m³.
16. The device according to claim 1, wherein the solid particles comprise one or more particles selected from sand, metal and metal oxide.